



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/666,284	09/21/2000	Sang Cheol Kim	P-116	8476
7590	09/20/2004			
Fleshner & Kim, LLP 14500 Avion Parkway Suite 125 Chantilly, VA 20151				
			EXAMINER PHILPOTT, JUSTIN M	
			ART UNIT 2665	PAPER NUMBER

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/666,284

Applicant(s)

KIM, SANG CHEOL

Examiner

Justin M Philpott

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-25,30 and 31 is/are allowed.
- 6) ☒ Claim(s) 1,2,26 and 32 is/are rejected.
- 7) ☒ Claim(s) 3-16 and 27-29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claims 3-16 and 27-29 are objected to because of the following informalities: “the collision signal” (claim 3, line 5) should be changed to “the collision control signal” since it appears reference is being made to the collision control signal introduced in lines 3-4 of the same claim. Claims 4-16 and 27-29 are objected to because of their dependency on the objected claim.
3. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 26 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) in view of U.S. Patent No. 5,774,658 to Kalkunte et al.

Regarding claims 1 and 32, AAPA discloses a well known Local Area Network LAN interfacing apparatus (FIG. 2), comprising: an Ethernet controller (10), which performs a control operation for LAN interfacing (specification, page 2, lines 12-13); a codec (20), which is coupled to the Ethernet controller (10) and which codes and decodes transmission/reception data (specification, page 2, lines 13-14); and a transceiver (30), which is coupled to the codec (20) and which transmits/receives data and detects data collisions on a LAN (specification, page 2,

Art Unit: 2665

lines 14-15). However, AAPA may not disclose a retransmission control circuit coupled to the Ethernet controller and codec.

Kalkunte also teaches a LAN apparatus, and further, teaches the apparatus comprises a retransmission control circuit (e.g., within UMA station 18) to retransmit data after a prescribed delay period (e.g., retransmit at a later time slot in accordance with delay time) when a prescribed number of collisions occur on the LAN (e.g., see col. 8, line 41 – col. 9, line 27 and FIGS. 5 and 6 regarding number of collisions N). Further, regarding claim 32, Kalkunte implicitly teaches the collisions are in a single frame (e.g., see col. 9, lines 1-2, wherein the number of collisions, N, is calculated up to 16) and teaches storing a subsequent data packet of the frame in a buffer (e.g., see col. 8, lines 66-67 regarding saving a data packet for transmission during another time). The teachings of Kalkunte provides a means for accommodating an increased number of stations of different protocols without increasing collisions (e.g., see col. 2, line 11 – col. 3, line 32). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the LAN apparatus teachings of Kalkunte to the well known LAN apparatus of AAPA FIG. 2 in order to accommodate an increased number of stations of different protocols without increasing collisions.

Regarding claim 2, Kalkunte teaches retransmitting an n-th data all over again when the n-th data collides on the LAN (e.g., see col. 8, line 12 – col. 9, line 26 and FIGS. 5 and 6, wherein at step 106 when N=16, indicating the n-th data collides on the LAN, and the n-th data is retransmitted all over again by returning to step 76). As discussed above, the teachings of Kalkunte provides a means for accommodating an increased number of stations of different protocols without increasing collisions (e.g., see col. 2, line 11 – col. 3, line 32). Thus, at the

Art Unit: 2665

time of the invention it would have been obvious to one of ordinary skill in the art to apply the LAN apparatus teachings of Kalkunte to the well known LAN apparatus of AAPA FIG. 2 in order to accommodate an increased number of stations of different protocols without increasing collisions.

Regarding claim 26, Kalkunte teaches retransmission outputs an n-th data packet in accordance with a back-off algorithm (e.g., truncated binary exponential backoff TBEB, see col. 8, lines 41-46) after collisions of n-1 data packets of a single frame (e.g., when  $N=15$ ). As discussed above, the teachings of Kalkunte provides a means for accommodating an increased number of stations of different protocols without increasing collisions (e.g., see col. 2, line 11 – col. 3, line 32). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the LAN apparatus teachings of Kalkunte to the well known LAN apparatus of AAPA FIG. 2 in order to accommodate an increased number of stations of different protocols without increasing collisions.

***Allowable Subject Matter***

4. Claims 17-25, 30 and 31 are allowed.
5. Claims 3-16 and 27-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2665

6. The following is a statement of reasons for the indication of allowable subject matter: Claims 3 and 17 recite a particular configuration for collision control operation which was not found in a search of related prior art.

Claims 18-25, 30 and 31 depend upon claim 17 and are therefore also allowed.

Claims 4-16 and 27-29 depend upon claim 3 and therefore also comprise allowable subject matter.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,418,784 to Ramakrishnan et al. discloses a method of controlling the IPG, U.S. Patent No. 5,940,399 to Weizman discloses methods of collision control in CSMA LANs, and U.S. Patent No. 6,611,529 to Krishnakumar et al. discloses a method of priority access for real-time traffic in contention-based networks.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 571.272.3162. The examiner can normally be reached on M-F, 9:00am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 571.272.3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2665

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Justin M Philpott



HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600